

Report of the Laws and Regulations Committee

Joe Gomez, Chairman
New Mexico Weights and Measures

Reference
Key Number

200 INTRODUCTION

This is the report of the Committee on Laws and Regulations (hereinafter referred to as “Committee”) for the 90th Annual Meeting of the National Conference on Weights and Measures (NCWM). It is based on the Interim Report offered in the NCWM Publication 16, “Committee Reports,” testimony at public hearings, comments received from the regional weights and measures associations and other parties, the addendum sheets issued at the Annual Meeting, and actions taken by the membership at the voting session of the Annual Meeting. The informational items presented below were adopted as presented when this report was approved.

Table A identifies the agenda items in the Report by Reference Key Number, title, and page number. The first three digits of the Reference Key Numbers of the items are assigned from the subject series listed below. Voting items are indicated with a “V” after the item number. Items marked with an “I” after the item number are informational. Items marked with a “D” after the key numbers are developing issues. The developing designation indicates an item has merit; however, the item is returned to the submitter for further development before any action is taken at the national level. Items marked “W” have been withdrawn from consideration. Table B lists the appendices to the report, and Table C provides a summary of the results of the voting on the Committee’s items and the report in entirety.

This report contains recommendations to amend National Institute of Standards and Technology (NIST) Handbook 130, 2002 Edition, “Uniform Laws and Regulations,” or NIST Handbook 133, “Checking the Net Contents of Packaged Goods,” Fourth Edition. Proposed revisions to the handbook(s) are shown in **bold face print** by ~~striking out~~ information to be deleted and underlining information to be added. New items proposed for the handbooks are designated as such and shown in **bold face print**. Text presented for information only is shown in *italic print*. When used in this report, the term “weight” means “mass.”

Subject Series	
Introduction	200 Series
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Weights and Measures Law (WML)	221 Series
Weighmaster Law (WL).....	222 Series
Engine Fuels, Petroleum Products, and Automotive Lubricants Inspection Law (EFL).....	223 Series
Uniform Regulations	230 Series
Packaging and Labeling Regulation (PLR)	231 Series
Method of Sale Regulation (MSR).....	232 Series
Unit Pricing Regulation (UPR)	233 Series
Voluntary Registration Regulation (VRR)	234 Series
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Uniform National Type Evaluation Regulation (UNTER).....	236 Series
Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation (EFR).....	237 Series
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	<i>Yeas</i>	<i>Nays</i>	<i>Yeas</i>	<i>Nays</i>	
221-1	33	5	23	7	Item Passed
234-1	36	1	33	0	Item Passed
237-1	37	0	38	0	Item Passed
200 - Entire Committee Report	37	0	38	0	Report Accepted

Details of all Items
(In order by Reference Key Number)

221 UNIFORM WEIGHTS AND MEASURES LAW

221-1 V Update Terminology

(This item was adopted)

Source: Southern Weights and Measures Association (SWMA)

Recommendation: Amend the UWML as described below:

Amend the Table of Contents as shown:

Section	Page
1. Definitions	21
1.4. Primary Standards	21
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1.12. Standard, Field	23
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Delete Sections 1.4. and 1.5. as follows and renumber the remaining definitions in sequence:

~~1.4. Primary Standards. — The term “primary standards” means the physical standards of the State that serve as the legal reference from which all other standards for weights and measures are derived.~~

~~1.5. Secondary Standards, Secondary. — The term “secondary standards” means the physical standards that are traceable to the primary standards through comparisons, using acceptable laboratory procedures, and used in the enforcement of weights and measures laws and regulations.~~

Add these definitions:

**1.12. Standard, Field. - A physical standard that meets specifications and tolerances in NIST 105-series standards (or other suitable and designated standards) and is traceable to the reference or working standards through comparisons, using acceptable laboratory procedures, and used in conjunction with commercial weighing and measuring equipment (1.13).
(Added 2005)**

**1.13. Accreditation. - A formal recognition by a recognized Accreditation Body that a laboratory is competent to carry out specific tests or calibrations or types of tests or calibrations. NOTE: Accreditation does not ensure compliance of standards to appropriate specifications.
(Added 2005)**

1.14. Calibration. - A set of operations which establishes, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system, or values represented by a material measure, and the corresponding known values of a measurand.

**Also: Comparison of a measurement standard or instrument with another standard or instrument to detect, correlate, report, or eliminate by adjustment any inaccuracy of the compared.
(Added 2005)**

**1.15. Traceability. - The property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties.
(Added 2005)**

**1.16. Uncertainty. - A parameter associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the measurement.
(Added 2005)**

**1.17. Verification. - The formal evaluation of a standard or device against the specifications and tolerances for determining conformance.
(Added 2005)**

**1.18. Recognition. - A formal recognition by NIST Weights and Measures Division that a laboratory has demonstrated the ability to provide traceable measurement results and is competent to carry out specific tests or calibrations or types of tests or calibrations.
(Added 2005)**

**1.19. Standard, Reference. - A standard, generally of the highest metrological quality available at a given location, from which measurements made at that location are derived. The term “reference standards” means the physical standards of the State that serve as the legal reference from which all other standards for weights and measures within that State are derived.
(Added 2005)**

**1.20. Standard, Working. - A standard that is usually calibrated against a reference standard, and is used routinely to calibrate or check material measures, measuring instruments, or reference materials. The term “working standards” means the physical standards that are traceable to the reference standards through comparisons, using acceptable laboratory procedures, and used in the enforcement of weights and measures laws and regulations.
(Added 2005)**

Amend Section 3 as shown:

Section 3. Physical Standards

Weights and measures that are traceable to the U.S. prototype standards supplied by the Federal Government, or approved as being satisfactory by the National Institute of Standards and Technology, shall be the State **primary reference and working** standards of weights and measures, and shall be maintained in such calibration as prescribed by the National Institute of Standards and Technology **as demonstrated through laboratory accreditation or recognition**. All ~~secondary-field~~ standards may be prescribed by the director and shall be verified upon their initial receipt, and as often thereafter as deemed necessary by the director.
(Amended 2005)

Amend Sections 12a, 12h, and 12p as follows:

Section 12. Powers and Duties of the Director

The Director shall:

- a. maintain traceability of the State standards ~~to the national standards in the possession of the National Institute of Standards and Technology~~ **as demonstrated through laboratory accreditation or recognition;**
(Amended 2005)
- h. ~~test annually the~~ **verify the field** standards for weights and measures used by any ~~city or county jurisdiction~~ within the State, **before being put into service, tested annually or as often thereafter as deemed necessary by the director based on statistically evaluated data,** and approve the same when found to be correct;
(Amended 2005)
- p. provide for the training of weights and measures personnel, and may establish minimum training and performance requirements which shall then be met by all weights and measures personnel, whether county, municipal, or State. The director may adopt the training standards of the National Conference on Weights and Measures' National Training Program **and the laboratory metrology standards specified by the NIST accreditation and/or recognition requirements;** and
(Added 1991; Amended 2005)

Discussion: This item came to the Southern Weights and Measures Association from the NIST Handbook Update Work Group in conjunction with Item 234-1 and Specifications and Tolerances (S&T) Committee Item 360-2. It is the intent of the work group that these three items be considered together.

One of the reasons for these proposals is to update the terminology used in Handbooks 130 and 44 to conform to international definitions. The terms "primary standard" and "secondary standard" have been eliminated to avoid confusion with the international usage of these terms. Terms like "reference standard," "field standard," "traceability," and "uncertainty" have been added to reflect their use within these documents. The proposed changes also allow state directors to exercise more discretion when evaluating calibration intervals, referencing documentary standards, and accepting calibration reports.

This particular proposal allows state directors to change the calibration interval for field standards (which are now required to be calibrated annually). This proposal permits a jurisdiction to collect historical calibration data, including "as-found" measurements, to evaluate whether or not an annual calibration interval is appropriate for a particular type of standard. Based on a statistical analysis of its historical data, a lab may find that its stainless steel field weights only need to be calibrated once every 5 years, while their cast iron weights need to be calibrated every 6 months. The intent is to save jurisdictions time and money by setting calibration intervals at suitable frequencies rather than at arbitrary fixed intervals. This should also lead to improved inspection accuracy by ensuring field standards are within tolerance during the entire calibration interval. Laboratory metrologists should be familiar with adjusting calibration intervals for laboratory standards and may be a useful resource for both providing data and

doing the statistical analysis. Jurisdictions that need more information or assistance with statistical approaches to changing calibration intervals may consult the National Conference of Standards Laboratories International (NCSLI) Recommended Practice (RP) #1, "Establishment & Adjustment of Calibration Intervals."

These proposed changes would have relatively little effect on state and local weights and measures programs. There is no mandate for a jurisdiction to change the way it currently operates. The proposed changes would serve only to increase control and flexibility when evaluating field standard calibration intervals, the acceptance of accredited private lab calibration reports, and other similar topics. Much of what is being proposed reflects practices already occurring in jurisdictions across the country. The Committee discussed this item in a joint session with the Specifications and Tolerances Committee and met with both NIST and several metrologists to resolve questions related to the meaning of the definitions.

The Committee received a comment expressing reservations about the appropriateness of all the new definitions proposed but concluded the new definitions were appropriate and submitted the item for adoption.

232 METHOD OF SALE REGULATION

232-1 D Temperature Compensation for Petroleum Products

Source: Southern Weights and Measures Association (SWMA). (See Item 232-4 in the Report of the 89th NCWM Annual Meeting in 2004.)

Recommendation: Amend the Method of Sale Regulation in Handbook 130 as shown below:

2.XX. Temperature Correction for Petroleum Products Other Than LPG. - All petroleum products other than LPG shall be sold by liquid volume.

2.XX.1. Petroleum products sold in volumes greater than 18,927 liters (5,000 U.S. gallons) may be corrected to the volume at 15 °C (60 °F), provided:

2.XX.1.1. The correction is made through automatic means; and

2.XX.1.2. The measuring device and all associated documents clearly indicate the volume has been corrected for temperature.

2.XX.2. Petroleum products sold in volumes less than or equal to 18,927 liters (5,000 U.S. gallons) through (list specific device(s)) may be corrected to the volume at 15 °C (60 °F), provided:

2.XX.2.1. The correction is made through automatic means;

2.XX.2.2. The measuring device and all associated documents clearly indicate the volume has been corrected for temperature; and

2.XX.2.3. All sales by the same vendor within a state are corrected over at least a 12-month period.

2.XX.3. The volume of petroleum products sold through retail motor-fuel devices and in all transactions not covered in 2.XX.2. or 2.XX.3. shall be the volume at the conditions at the time of sale. Products shall not be artificially heated prior to sale.

Discussion: Selling fuel adjusted to the volume at 15 °C (60 °F) throughout the distribution system is the most equitable way fuel can be sold without the buyer or seller gaining a competitive advantage. Allowing a distributor to buy product at wholesale by gross volume and sell it at retail by net volume is not equitable. A single method of sale should be required so a prospective customer can make a value comparison. There is no practical way

customers can make value comparisons when some locations sell product temperature compensated and other locations sell the same product without temperature compensation.

This item is considered in conjunction with a temperature compensation item that is before the Specifications and Tolerances (S&T) Committee, Item 331-1, although that item is limited to vehicle-tank meters. The Committee believes this is an important issue that should be given careful consideration and that it must be discussed with parties that may be affected by its adoption. The Committee has requested authorization and funding from the Board of Directors to establish a work group to bring together interested parties and build a consensus on the best way to resolve this issue.

A similar proposal was made by NEWMA in 2000 that mirrored a temperature compensation item before the S&T Committee at the time. In 2000 NEWMA noted that Pennsylvania, New Hampshire, Maine, and Canada permit temperature compensation in sales of products like home heating fuel and retail gasoline. In 2001 the Committee withdrew that item after several jurisdictions opposed its adoption.

At the 2005 Interim Meeting the Committee heard several comments opposing the original language of this item and received an alternate recommendation from NEWMA. The Committee agreed to accept and circulate the NEWMA language for comments.

Regarding the NEWMA language, the Committee heard a comment that the 5,000-gallon threshold proposed in section 2.XX.2. is too large because, although the capacity of a tanker truck is more than 5,000 gallons, many trucks are compartmentalized. The compartmentalization of the trucks results in the delivery of a single product (e.g., grade of fuel) that is significantly less than 5,000 gallons. 1,500 gallons was proposed as an appropriate alternative. The Committee also received a comment that language would need to be inserted into section 2.XX.3. to recognize the need to heat certain viscous products, like Heating Oil #4 and Heating Oil #6, in order to allow them to flow properly.

The Committee also received comments opposing the permissive nature of the NEWMA language while others supported the voluntary nature of the requirement. One concern is that permitting temperature compensation without mandating it will encourage some companies to compensate while others will not. How is a consumer to make an informed purchasing decision when faced with choosing between competitors who are selling the same product using different methods of sale? Related to this, the Committee heard an alternate proposal to go back to the original language but mandate temperature compensation for those devices capable of pumping at a rate in excess of 20 gallons per minute, and prohibit temperature compensation for everything else. This would effectively require temperature compensation for all vehicle-tank meters, wholesale and terminal meters, and large volume diesel dispensers while prohibiting it for standard retail motor-fuel devices. Some comments expressed concern about the burden of educating consumers about what temperature compensation is and how it will affect their evaluation of options when making purchasing decisions.

The Committee will retain this item as a developing item until a consensus can be reached on the language to be proposed and will send the item back to all of the regional associations for further consideration.

234 UNIFORM REGULATION FOR THE VOLUNTARY REGISTRATION OF SERVICEPERSONS AND SERVICE AGENCIES

234-1 V Update Terminology

(This item was adopted)

Source: Southern Weights and Measures Association

Recommendation: Amend Sections 1 (Policy), 5 (Minimum Equipment), 8 (Placed in Service Report), and 9 (Examination of Calibration or Certification of Standards and Testing Equipment) in Handbook 130 as follows:

Section 1. Policy

For the benefit of the users, manufacturers, and distributors of commercial weighing and measuring devices, it shall be the policy of the Director of Weights and Measures, hereinafter referred to as "Director," to accept registration of (a) an individual and (b) an agency providing acceptable evidence that he, she, or it is fully qualified by training or experience to install, service, repair, or recondition a commercial weighing or measuring device; has a thorough working knowledge of all appropriate weights and measures laws, orders, rules, and regulations; and has possession of, or has available for use, and will use suitable and calibrated weights and measures field standards and testing equipment appropriate in design and adequate in amount. (An employee of the government shall not be eligible for registration.)

The Director will check the qualifications of each applicant. It will be necessary for an applicant to have available sufficient field standards and equipment (see § 5).

It shall also be the policy of the Department to issue to qualified applicants, whose applications for registration are approved, a "Certificate of Registration." This gives authority to remove rejection seals and tags placed on Commercial and Law-Enforcement Weighing and Measuring Devices by authorized weights and measures officials, to place in service repaired devices that were rejected, or to place in service devices that have been newly installed.

The Director is NOT guaranteeing the work or fair dealing of a Registered Serviceperson or Service Agency. He will, however, remove from the registration list any Registered Serviceperson or Service Agency that performs unsatisfactory work or takes unfair advantage of a device owner.

Registration with the Director shall be on a voluntary basis. The Director shall reserve the right to limit or reject the application of any Serviceperson or Service Agency and to revoke his, her, or its permit to remove rejection seals or tags for good cause.

This policy shall in no way preclude or limit the right and privilege of any individual or agency not registered with the Director to install, service, repair, or recondition a commercial weighing or measuring device (see § 7).

(Added 1966; Amended 1984 and 2005)

Section 5. Minimum Equipment

Applicants must have available sufficient standards and equipment to adequately test devices as set forth in the Notes section of each applicable code in NIST Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." ~~When applicable, this equipment will meet the specifications of National Institute of Standards and Technology Handbook 105-1, "Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures, Specifications and Tolerances for Field Standard Weights (NIST Class F)," National Institute of Standards and Technology Handbook 105-2, "Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures, Specifications and Tolerances for Field Standard Measuring Flasks," or National Institute of Standards and Technology Handbook 105-3, "Specifications and Tolerances for Reference Standards and Field Standard Weights and Measures, Specifications and Tolerances for Graduated Neck Type Volumetric Field Standards."~~ series standards (or other suitable and designated standards). This section shall not preclude the use of additional field standards and/or equipment, as approved by the Director, for uniform evaluation of device performance. See also § 9.

(Added 1984; Amended 2005)

Section 8. Placed in Service Report

The Director shall furnish each Registered Serviceperson and Registered Service Agency with a supply of report forms to be known as "Placed in Service Reports." Such a form shall be executed in triplicate, shall include the assigned registration number, and shall be signed by a Registered Serviceperson or by a

serviceperson representing a Registered Agency for each rejected device restored to service and for each newly installed device placed in service. Within 24 hours after a device is restored to service or placed in service, the original of the properly executed Placed in Service Report, together with any official rejection tag removed from the device, shall be **mailed-forwarded** to the Director at (address). The duplicate copy of the report shall be handed to the owner or operator of the device, and the triplicate copy of the report shall be retained by the Registered Serviceperson or Registered Service Agency.

(Added 1966; **Amended 2005**)

Section 9. Examination and Calibration or Certification of Standards and Testing Equipment

All **field** standards that are used for servicing and testing weights and measures devices for which competence is registered shall be submitted to the Director for **initial and subsequent examination and certification verification and calibration** at intervals determined by the director. A Registered Serviceperson or Registered Service Agency shall not use in servicing commercial weighing or measuring devices any **field** standards or testing equipment that have not been **certified-calibrated or verified** by the Director. ~~Equipment calibrated by another State weights and measures laboratory that can show evidence of measurement traceability to the National Institute of Standards and Technology will also be recognized as equipment that is suitable for use by Registered Servicepersons or Registered Service Agencies in this State. In lieu of submission of physical standards the Director may accept calibration and/or verification reports from any laboratory that is formally accredited or recognized. The Director shall maintain a list of organizations from which the State will accept calibration reports. The State shall retain the right to periodically monitor calibration results and/or to verify field standard compliance to specifications and tolerances when field standards are initially placed into service or at any intermediate point between calibrations.~~

(Added 1966; Amended 1984, **and 1999, and 2005**)

Discussion: This item came to the Southern Weights and Measures Association from the NIST Handbook Update Work Group in conjunction with Item 221-1 and Specifications and Tolerances (S&T) Committee Item 360-2. It is the intent of the work group that these three items be considered together.

One of the reasons for these proposals is to update the terminology used in Handbooks 130 and 44 to conform to international definitions. The terms “primary standard” and “secondary standard” have been eliminated to avoid confusion with the international usage of these terms. Terms like “reference standard,” “field standard,” “traceability,” and “uncertainty” have been added to reflect their use within these documents. The proposed changes allow state directors to exercise additional discretion when evaluating calibration intervals, referencing documentary standards, and accepting calibration reports.

This particular proposal grants state directors the freedom to reference ASTM, OIML, or other suitable documentary standards, in addition to NIST documents, when defining specifications for field standards. Currently, some standards being used in the field have no corresponding NIST document defining their specifications. Allowing ASTM, OIML, or other suitable documentary standards to be referenced would fill this void. State directors must be able to evaluate the impact of a field standard that deviates from documentary standards and assess how it might affect measurement results, functionality, efficiency, and safety. State directors would have the authority and flexibility to accept and designate field standards and to grandfather or otherwise allow deviations from standard specifications. State directors may choose to require unique calibration intervals for these deviant field standards, or they may reject and/or confiscate the deviant standard based on evaluation results. For further guidance on documentary standards that may be used as specifications and tolerances for field standards, please see Appendix A.

In addition, this proposal would allow state directors to accept calibration reports from accredited industry laboratories in addition to NIST WMD-recognized state laboratories. If a private laboratory is accredited by a National Cooperation for Laboratory Accreditation (NACLA)-approved accreditation body, or recognized by NIST WMD as capable of providing traceable measurement results, a state director may decide whether or not s/he wants to accept the calibration reports of the lab after evaluating the scope of accreditation and assessing the lab’s measurement uncertainty. Initial verification of field standards may still be required, however, since a calibration

report provides no guarantee the equipment meets specifications. Accreditation is not conformity assessment and should not be used for that purpose. State metrologists and technical experts at NIST may be able to assist in evaluating the acceptability of outside calibration reports.

These proposed changes would have relatively little effect on state and local weights and measures programs. There is no mandate for a jurisdiction to change the way that it currently operates. The proposed changes would serve only to increase local control and flexibility when evaluating things like field standard calibration intervals and the acceptance of accredited private lab calibration reports. Much of what is being proposed reflects practices already occurring in jurisdictions across the country. The Committee discussed this item in a joint session with the Specifications and Tolerances Committee and met with both NIST and several metrologists to resolve questions related to the meaning of the definitions.

The Committee did not receive any comments opposing this item.

237 ENGINE FUELS, PETROLEUM PRODUCTS, AND AUTOMOTIVE LUBRICANTS REGULATION

237-1 V Biodiesel Fuel Identification and Labeling (This item was adopted)

Source: Central Weights and Measures Association (CWMA). (See item 237-3B in the Report of the 89th NCWM Annual Meeting in 2004.)

Recommendation: Amend Handbook 130 Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation by adding the following.

3.15. Biodiesel.

3.15.1. Identification of Product. - Biodiesel and biodiesel blends shall be identified by the capital letter B followed by the numerical value representing the volume percentage of biodiesel fuel. (Examples: B10; B20; B100)

3.15.2. Labeling of Retail Dispensers Containing Between 5 % and 20 % Biodiesel. - Each retail dispenser of biodiesel blend containing more than 5 % and up to and including 20 % biodiesel shall be labeled with either:

3.15.2.1. The capital letter B followed by the numerical value representing the volume percentage of biodiesel fuel and ending with 'biodiesel blend.' (Examples: B10 biodiesel blend; B20 biodiesel blend), or;

3.15.2.2. The phrase "biodiesel blend between 5 % and 20 %" or similar words.

3.15.3. Labeling of Retail Dispensers Containing More Than 20 % Biodiesel. - Each retail dispenser of biodiesel or biodiesel blend containing more than 20 % biodiesel shall be labeled with the capital letter B followed by the numerical value representing the volume percentage of biodiesel fuel and ending with either 'biodiesel' or 'biodiesel blend.' (Examples: B100 biodiesel; B60 biodiesel blend)

3.15.4. Documentation for Dispenser Labeling Purposes. - The retailer shall be provided, at the time of delivery of the fuel, with a declaration of the volume percent biodiesel on an invoice, bill of lading, shipping paper, or other document. This documentation is for dispenser labeling purposes only; it is the responsibility of any potential blender to determine the amount of biodiesel in the diesel fuel prior to blending.

3.15.5. Exemption. - Biodiesel blends containing 5 % or less biodiesel by volume are exempted from the requirements of Section 3.15.

Discussion: The Committee has been working on this item since 2002 and has been monitoring the activities of the American Society for Testing and Materials (ASTM) with regard to biodiesel fuels. The Committee has decided to move forward with identification and labeling requirements for biodiesel blends containing more than 5 % biodiesel by volume. The Committee agrees it is important for consumers to be properly informed about what is being offered for sale so they can make informed purchases. The Committee has been informed that ASTM is considering changing the “Fill and Go” specifications in D 975 to include biodiesel blends of 5 % or less. Existing laws and regulations require accurate and adequate information to be placed on commodities to allow consumers to make price and quantity comparisons. Consumers must also be able to rely on manufacturers’ product “claims” and products must conform to specifications.

When the first biodiesel specification was introduced at ASTM in 1993, it proposed a specification for biodiesel used as a pure fuel, called B100. However, several engine manufacturers had reservations about B100 biodiesel because they had no experience using blends over 20 % (B20). Engine manufacturers recommend that users consult with their engine manufacturer before using biodiesel blends above 5 % (B5) as concerns related to costs, rubber and gasket compatibility, and cold flow properties exist with these blends. While experience over the last 10 years and 40 million on-road miles has shown that biodiesel blends up to 20 % (B20) do not require modifications to the fuel systems of conventional diesel engines, the manufacturers of these engines still promote caution when using biodiesel blends over 5 % (B5). In 2002 ASTM adopted ASTM D 6751, Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels. This specification is for use as a blend component with diesel fuel oils defined in Specification D 975.

ASTM is considering classifying biodiesel blends up to B5 as “Fill and Go” since generally they do not require changes to the engine or fuel system. ASTM is also considering adding a separate specification for B20 blends. Biodiesel levels higher than B20 may need to have different gaskets and hoses. While blends of biodiesel over 20 % are not readily available in today’s marketplace, they may be in the not-too-distant future. Therefore, the biodiesel industry supports accurate labeling for all fuel dispensers and encourages the NCWM to adopt these recommendations.

An issue that remains, however, is the opportunity for fraud that may occur if inaccurate percentages of biodiesel are claimed. Biodiesel blends cost significantly more than conventional diesel fuels. As such, there is a possibility that an unscrupulous fuel distributor might unfairly profit from claiming a higher concentration of biodiesel than they actually deliver. If a distributor claims that they are selling B20 and they are putting in only 1 %, then the distributor is misrepresenting the product. The biodiesel industry claims this is not a pump labeling issue but an enforcement issue.

Part of the problem with a strict percentage labeling requirement is that as biodiesel blends become more “mainstream” the percentage of biodiesel added may vary from day to day depending on the needs of the distributor. Currently this practice is discouraged by the relatively high cost of biodiesel. However, as the price of biodiesel moves closer to the price of diesel fuel, it becomes just one of the myriad of compounds which could make up conventional diesel fuel. Refiners could blend in biodiesel to reduce the sulfur content or aromatic content of the finished blend. They could use it to replace their existing lubricity additives. If the price of biodiesel was more equal to diesel, then they may add 1 % today, 5 % the next day, and 20 % the following day. Theoretically, as long as the finished blend meets the ASTM D 975 “Fill and Go” specification, the level of biodiesel could range as high as 5 % without consequence. Labeling requirements that are too restrictive would eliminate the flexibility of the “Fill and Go” concept and could significantly reduce the amount of biodiesel that is eventually used.

ASTM is currently developing a Biodiesel “Fill and Go” specification for D 975 that is not based on the parent fuels, but on the finished fuel and what is satisfactory for operation in a diesel engine. This may also mean changes to D 6751, which is a stand-alone specification. The current thinking is that the upper biodiesel concentration limit for the D 975 “Fill and Go” specification will be 5 % although it is possible that it could ultimately be higher or lower. Whatever the concentration of biodiesel, if the finished blend meets the D 975 “Fill and Go” specification, the fuel is D 975-grade diesel fuel and would have to be labeled as such. Some industry members believe that existing labeling requirements in Handbook 130 are sufficient to address this situation.

The National Biodiesel Board supports this proposal. The Committee did not receive any comments opposing this item.

237-2 I Premium Diesel Lubricity

Source: Southern Weights and Measures Association (SWMA)

Recommendation: Forward the following proposal to the Petroleum Subcommittee to review and consider.

Amend § 2.2.1. in Handbook 130 as follows:

2.2.1. Premium Diesel Fuel - All diesel fuels identified on retail dispensers, bills of lading, invoices, shipping papers, or other documentation with terms such a premium, super, supreme, plus, or premier must conform to the following requirements:

- (a) Cetane Number - A minimum cetane number of 47.0 as determined by ASTM Standard Test Method D 613.
- (b) Low Temperature Operability - A cold flow performance measurement which meets the ASTM D 975 tenth percentile minimum ambient air temperature charts and maps by either ASTM Standard Test Method D 2500 (Cloud Point) or ASTM Standard Test Method D 4539 (Low Temperature Flow Test, LTFT). Low temperature operability is only applicable October 1 - March 31 of each year.
- (c) Thermal Stability - A minimum reflectance measurement of 80 % as determined by ASTM Standard Test Method D 6468 (180 min, 150 °C).
- (d) Lubricity - A maximum wear scar diameter of 520 µm as determined by ASTM D 6079. ~~If an enforcement jurisdiction's single test of more than 560 µm is determined, a second test shall be conducted. If the average of the two tests is more than 560 µm, the sample does not conform to the requirements of this part.~~

Discussion: A member of the petroleum industry believes that the test and associated tolerances for lubricity on premium diesel specified in 2.2.1.(d) are inconsistent with that for regular diesel. Effective January 1, 2005, the test tolerance for regular diesel lubricity will be the ASTM D 6079 reproducibility of 136 µm (see ASTM D 975-04b). The NCWM has chosen to accept the ASTM reproducibility limits for all diesel (D 975) and gasoline (D 4814) properties (see § 7.2.2., Reproducibility), but has chosen a different reproducibility limit for premium diesel lubricity without providing any explanation as to why the ASTM reproducibility limit is insufficient. If the NCWM intends to impose a stricter lubricity requirement for premium diesel, it should designate a tighter specification for this property instead of a different test tolerance (e.g., for regular and premium gasoline, premium has a different octane specification than regular but the test tolerance is the same). ASTM reproducibility limits are, by definition, based on establishing a 95 % probability that product that should pass, will pass. Applying an average test as specified in 2.2.1.(d) reduces this probability to only 80 %.

The Committee received comments from several members of the Premium Diesel Work Group (Work Group) who do not support the item as presented by the petroleum industry member. The Work Group members felt that the process that led to the current definition was very thorough and complete, and that the premium diesel lubricity requirements were established with a full understanding of their implications. The work group members felt that very knowledgeable individuals provided input to the process, which lead to the consensus position contained in the current regulation. The work being done by the work group was reported at meetings of ASTM Subcommittee E-2 every six months. The current regulation has been endorsed by the American Petroleum Institute, the Engine Manufacturer's Association, and the NCWM.

Prior to this requirement being adopted, the ASTM Lubricity Task Force conducted a great deal of research on this topic. Based on their research, the ASTM Lubricity Task Force concluded that a limit of 520 microns would meet the requirements of equipment in the field. Since the passage of this model regulation, ASTM included a lubricity requirement for No. 1 and No. 2 diesel fuel effective January 1, 2005. The ASTM requirement is also 520 microns.

The work group members reported that when this regulation was being written fuels with adequate lubricity provided a functional benefit to the end user. The work group agreed with the ASTM Lubricity Task Force that

520 microns was the correct limit to set for premium diesel. However, the work group's review process also indicated increased pump wear for fuels with High-Frequency Reciprocating Rig (HFRR) values greater than 560 microns. The current reproducibility value of the HFRR test method would have placed enforcement well beyond the 560 micron level, essentially allowing fuels with little lubricity protection to be sold as Premium. The work group felt it could not recommend a premium fuel standard that would permit excessive pump wear. Using the statistical tools provided in ASTM D 3244, the work group evaluated an enforcement limit of 560 microns. The statistical tools indicated that a single laboratory reporting the assigned test value would have an enforcement limit of approximately 80 % probability of acceptance, while the average of two separate laboratories reporting the assigned test value would have an enforcement limit of approximately 90 % probability of acceptance. It was agreed that for a premium fuel the average of two test results was the best approach given the current test methods and precision available. Therefore, if a test exceeds 560 microns, then a second test must be run. The average of the two tests must exceed 560 microns before a violation would occur. At this time, the work group members believe this remains the best approach.

The Committee believes that it lacks the expertise necessary to adequately evaluate this proposal. The Committee voted to forward this proposal to the Petroleum Subcommittee for its review and consideration, and requests that the Subcommittee provide the Committee with a recommendation and justifications for its adoption.

260 NIST HANDBOOK 133, CHECKING THE NET CONTENTS OF PACKAGED GOODS

260-1 W Amend § 2.3 Basic Test Procedure, and Table 2-5

Source: Central Weights and Measures Association (CWMA). (See Item 260-4 in the Report of the 89th NCWM Annual Meeting in 2004.)

Recommendation: Amend Handbook 133 § 2.3 as follows:

Where are Maximum Allowable Variations found?

Find the MAV values for packages labeled by weight, volume, count, and measure in the tables listed below in Appendix A.

- Packages labeled by weight See Table 2-5
- Packages labeled by volume liquid or dry See Table 2-6
- Packages labeled by count See Table 2-7
- Packages labeled by length (width), or area See Table 2-8
- Packages ~~labeled with~~ **bearing a** USDA seal of inspection - Meat and Poultry **when** See Table 2-9
labeled weight is provided by the USDA-inspected facility
- Textiles, polyethylene sheeting and film, mulch and soil labeled by volume, See Table 2-10
 packaged firewood, and packages labeled by count with less than 50 items

Amend the Header of Table 2-5 in Handbook 133 as follows:

Table 2-5. Maximum Allowable Variations (MAVs) for Packages Labeled by Weight
~~Do Not Use This Table for~~ **For Meat and Poultry Products subject to USDA Regulations when Labeled Weight is**
Provided by USDA-Inspected Facility – Use Table 2-9

For Polyethylene Sheeting and Film, see Table 2-10. Exceptions to the MAVs.

Discussion: This proposal was originally intended to more clearly define when the USDA lower limits should apply (Table 2-9) and when MAVs should apply (Table 2-5) to packages of meat and poultry. This item was informational on the Committee's agenda in 2004 and NIST was granted editorial privileges to amend

Handbook 133 to include this proposal. However, after researching the issue NIST believes this proposal is in conflict with language adopted by the USDA. The USDA requires that Table 2-9 lower limits be applied to any “meat and poultry product subject to USDA requirements.” The language adopted by the USDA does not distinguish between packages packed and weighed at a USDA plant and packages packed at a USDA plant but weighed elsewhere; it simply requires that any package subject to USDA jurisdiction be tested with the USDA lower limits. NIST cannot include language in Handbook 133 that is in conflict with federal regulations.

NIST contacted the USDA about this item and was advised that USDA does not support the changes recommended in this proposal. Subsequently, all of the regional associations have withdrawn their support for this proposal and the Committee voted to withdraw this item.

260-2 W Amend § 3.11 and MAV Table 2-10

Source: Western Weights and Measures Association (WWMA). (See Item 260-6 in the Report of the 89th NCWM Annual Meeting in 2004.)

Recommendation: Amend the application and header of Handbook 133 Table 2-10 as follows to allow the MAVs that apply to Mulch and Soil to also apply to similar products, such as Wood Shavings and Animal Bedding:

Table 2-10. Exceptions to the Maximum Allowable Variations for
Textiles, Polyethylene Sheeting and Film, Mulch ~~and~~ Soil, **and Other Similar Products** Labeled by Volume,
Packaged Firewood, and
Packages Labeled by Count with Less than 50 Items

Amend Handbook 133 § 3.11 to read:

3.11. Mulch ~~and~~ Soil, **and Other Similar Products Labeled by Volume**

Discussion: A manufacturer of wood fiber products believes wood shavings, labeled by volume, should receive the same MAV exceptions as mulch, soils or peat moss. The wood fiber products in question could conceivably be used as animal bedding, insulation, mulch (a horticultural above-ground dressing), etc. Item 250-10, which was adopted at the 83rd National Conference on Weights and Measures in 1998 and was entitled “Bark Mulch and Other Organic Products - Maximum Allowable Variations,” discussed the reasoning and the necessity for expanded MAVs in certain circumstances, and some of this rationale may apply to other wood fiber products.

The Committee believes that the manufacturer seeking this additional allowance has not provided sufficient data to support its position. There is an established procedure for evaluating MAVs and the manufacturer has not followed it. The Committee feels this item needs to be further developed by the manufacturer in conjunction with a regulatory agency to provide reliable data upon which to base any decision.

In addition, concerns have been raised about the expansion of the mulch, soil, and peat moss sections to “Other Similar Products.” What are “Other Similar Products?” Are they products that are used in similar applications? If so, and if “Other Similar Products” is intended to extend to pet beddings made of wood shavings, should it also be extended to pet beddings made of paper (also a wood product)? What about pet beddings made from other substances (clay, straw, etc.)? It is believed that the language proposed is overly broad and needs to be better defined to capture the product under consideration without including products that do not require the larger MAV.

The Committee has received several comments opposing this item. The Committee has no received additional information from the original proponent of this item to justify its adoption and voted to withdraw this item.

260-3 W Make MAV Tables More Uniform

Source: Northeast Weights and Measures Association (NEWMA)

Recommendation: To evaluate whether or not the MAV tables in Handbook 133 should be revised to be more uniform with other national and global standards.

Discussion: The Committee heard from several manufacturers and packers that meeting the different MAVs in the global marketplace is not generally a problem for them. While most of the comments heard did not directly oppose this item, the overall sentiment was that this was not a high priority issue for manufacturers and packers. The Committee voted not to pursue the establishment of new MAVs through the collection of data. However, the Committee believed there may be merit in seeking to make Handbook 133 MAVs more uniform with other MAVs in the global marketplace. Subsequently, all of the regional associations have withdrawn their support for this item. The Committee voted to withdraw this item.

270 OTHER ITEMS**270-1 W Tare on Case-Ready Packages of Meat**

Source: Central Weights and Measures Association (CWMA)

Recommendation: The NCWM should petition the USDA to request a rule change that would require packers of case-ready consumer-sized packages of beef and pork to print the individual consumer package tare weights on the outside of the shipping case.

Discussion: For several years the USDA has required packers of case-ready poultry to print the individual consumer package tare weights on the outside of the shipping case. This proposal would extend this requirement to packers of case-ready meat (beef and pork) products.

As retail stores reduce or eliminate on-site meat cutting and processing, weights and measures officials are seeing more packages of meat that are shipped case-ready (i.e., the meat is already portioned into individual packages, wrapped, and labeled with all required information except weight). Retailers are required to label these packages with the correct weight before making them available for sale. However, retailers don't know what tare deduction to take and are reluctant to open a reasonable sample of packages to determine an average tare weight. This has led to inaccurate tares being used with these products.

NIST believes that the current requirement for poultry has taught us that placing tare weights on shipping cases is an imperfect system. Inspections have shown that tare weights printed on poultry shipping cases are often inaccurate—packers use unused dry tare for this determination and don't always include the weight of all the tare materials. Retailers often rely on these tares to their detriment. Jurisdictions may have difficulty determining from whom to seek compliance—the retailer (for selling a short-weight product) or the packer (for declaring an inaccurate tare). The fact that the packer falls under USDA jurisdiction may also cause additional hurdles. In addition, NIST is also concerned that inspectors may mistakenly rely on the accuracy of these tares when performing inspections. If the tares are inaccurate but inspectors rely on them to perform audit tests, will the inaccuracy ever be discovered? Inspectors must remain vigilant about checking the actual tare of these packages and not rely on the packer for this information. Enforcement action must only be taken on packages where the average used or unused dry tare has been determined.

The Committee received comments opposing this item. Several manufacturers and packers stated that tare materials and weights change on a regular basis and would be difficult to pre-stamp on cases. In addition, packers stated that tare weight information is already provided to the retailers and recommended that retailers who are not receiving this information should contact the packer. A national retailer stated that they receive updated tare information from

their packers in an electronic format on a regular basis, and that putting tare information on the shipping case would provide little benefit to them. The Committee voted to withdraw this item at its 2005 Interim Meeting.

Joe Gomez, New Mexico, Chairman
Joe Benavides, Texas
James Cassidy, Cambridge, Massachusetts
Vicky Dempsey, Montgomery County, Ohio
Dennis Johannes, California

Vince Orr, ConAgra Foods, Associate Member Representative
Brian Lemon, Canada, Technical Advisor
Doug Hutchinson, Canada, Technical Advisor
Tom Coleman, NIST, Technical Advisor
Kathryn Dresser, NIST, Technical Advisor

Laws and Regulation Committee

Appendix A

Sample List of Documentary Standards for Item #221-1

Physical Standard	Documentary Standard	Device	Calibration Interval	Notes
Cast Iron Weights	Handbook 105-1	Class III, III L, IV scales	6 months to 1 year	
Stainless Steel Weights	Handbook 105-1	Class III, III L, IV scales	5 years	
Class F1 Weights Class 2 Weights	OIML R111 ASTM E 617-97	Class II scales	1 year	
Glassware	Handbook 105-2	Package testing	10 years	
Test Measures (hand-held and 5-gallon truck or trailer mounted)	Handbook 105-3	Gas pumps	1 year	
Large Provers	Handbook 105-3	Meters	1 year	
LPG Provers	Handbook 105-4	LPG meters	1 year	
Stopwatches	Handbook 105-5	Taxi meters, timing devices, parking meters, Laundromats	1 year	
Thermometers	Handbook 105-6	Temperature corrections, refrigeration specifications, package checking	5 years	Annual inspection required
Small Volume Provers	Handbook 105-7	Meters	6 months to 1 year	Need EPO for field testing
Master Meters	API document in development	Master meters for petroleum		
Proving Rings and Load Cells	ASTM E 74	Wheel load weighers, weight carts, large mass standards	Rings: 5 years Cells: 6 months if used for wheel load weighers; evaluate with use for substitution weighing	Depends on use
Weight Carts	Handbook 105-8	Vehicle scales	6 months to 1 year	Needs to be recalibrated with any repair. Need EPO for field use
Hydrometers	ASTM E 100	Petroleum products; bulk oil meters	1 year	
Length Standards, Tapes	GGG-standard	Taxi meters, fabric scale decks, firewood, lobster gauges	5 years	Inspect before use
Containers	Handbook 133	Bulk mulch		
Berry Baskets	Handbook 44	Berry quantity		

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